Manage Forages to Maintain Cow Body Condition

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Total body energy reserves of a cow impact several parameters of productivity including reproductive performance and milk production. Hence, to maximize productivity, beef producers must manage nutritional inputs to provide cows with the feed needed to ensure adequate total body energy reserves are met. For producers that rely mostly on forages to provide these nutritional inputs, it is key to manage forages and pastures to optimize forage quality and quantity. The most practical method to estimate the energy reserves of a cow is by evaluating the proportion of body fat via body condition scoring (BCS). BCS is based on a numeric scale of 1-9, with cows at 1 being extremely thin and 9 being obese. Information on how to conduct BCS in beef cattle can be found at: http://www.agry.purdue.edu/forage%2Dshortage/video-scoring.html. As a general rule of thumb, it will take 80 lbs of weight gain for a mature cow and 150 lbs of gain for a first calf heifer to gain 1 BCS. The ideal BCS for mature beef cows is 5 to 5.5. Cows over a 6 are overweight and wasting feed resources. Cows under a BCS 5 are not being provided adequate nutritional inputs, which will negatively impact performance. Often, cows in poor body condition at calving have smaller calves that are weaker and more susceptible to disease. Thin cows produce less colostrum, which is lower in quality. As lactation proceeds, thin cows cannot produce milk to their genetic potential, thus reducing calf growth. These factors together result in reduced weaning weights of calves from thin cows. In addition, failing to have cows in an adequate body condition at calving and breeding will result in an extended period from calving to breeding and hinder fertility and reproductive efficiency.

It is important to evaluate the BCS of the cow herd regularly, at least monthly is recommended. Nutritional requirements for beef cows fluctuate during the yearly production cycles due to different stages of gestation and lactation. Requirements are the greatest during lactation, followed by the third trimester of pregnancy, and the least following weaning when milk production ceases. In addition, environmental stressors such as extreme cold, wind chill and/or wet weather further add to the nutritional requirements of the beef herd. If intake of energy and/or protein is below that required to meet the cow's nutritional needs, cows will try to compensate by mobilizing stored energy (body fat) and will lose body condition. Staying on top of BCS by monthly assessment will allow producers to adjust nutritional management accordingly if cows are losing body condition.

In grazing cows, nutritional status and, therefore, BCS is greatly affected by forage quantity and quality. It is critical to attempt to align the best forage quality and maximize forage amounts when cows' requirements are the greatest. One way to accomplish this is to implement rotational grazing. This allows pastures to have a rest period between grazing sessions to allow forage regrowth that promotes increased forage quantity and results in improved quality. A reduction in forage quality, which can occur as forages mature during the summer, can result in inadequate protein and energy delivery. With forages that are too mature, even if amounts are ample, lactating cows cannot physically consume enough of the poor quality grass to meet their needs. To improve pasture quality during summer conditions, producers should consider incorporating annual warm-season grasses into their pasture rotation. Warm-season annual grasses can serve as excellent forage sources during the late-summer when other pastures are exhausted. Forage quantity or availability is often a major limiting factor in grazing operations. Over-stocking pastures results in a depletion of forage availability and results in loss of BCS in cows. Inversely, if with the monthly assessment of BCS a loss of BCS were observed, the first consideration would be to reassess stocking rates.

In situations when forages available to graze are limited, or of poor quality, and stocking rates cannot be adjusted, other managerial strategies can be implemented to extend forages available and minimize losses in body condition of cows. One potential option is early weaning calves. This provides two benefits. First, removing the calves and ceasing lactation reduces the nutrient requirements of the cows. Thus, cows do not need to eat as much grass to get the nutrition needed to maintain BCS. Secondly, calves do consume some forage, especially as they get older. Removing the calves can conserve some forage for the cows. Another option is to provide the cows with an ionophore. Providing ionophores to grazing cattle can improve feed efficiency, thus allowing the cows to better utilize the forages available. Lastly, if forage supply is severely limited and cows are experiencing a dramatic loss in BCS, supplementation of feed stuffs which provide additional protein and/or energy feeds is required. While expensive to feed, failing to maintain cows in proper BCS will result in reduced production, reproduction, and ultimately negatively impact production efficiency.

In summary, maintaining cows in the proper BCS is critical to optimize production efficiency. Failing to do so can impact calf performance as well as cow reproductive efficiency. When relying on grazable forages to supply the nutrient needs for the cows, it is critical to manage pastures to maximize forage quality and quantity. Frequently assessing BCS will allow for adjustments in production practices to prevent a loss in BCS and a loss of production. If a decrease in BCS is observed, corrective measures must be implemented so production performance is not hindered.

For more information on this and other beef-related topics, visit the UMN Beef Team website at www.extension.umn.edu/beef.